REMARKS

Claims 1-28 are pending, with claims 1, 15, 19, and 27 being independent. Claims 1, 15

and 27 have been amended. No new matter has been added. Reconsideration and allowance of

the above-referenced application are requested.

Allowable Subject Matter:

The indication of allowable subject matter in claims 6-12, 20-23 and 28 is acknowledged

and appreciated. The claims are retained.

Claim Rejections under 35 U.S.C. 102(b) & 103(a):

Claims 1, 3-4, 14-15 and 27 stand rejected under 35 U.S.C. 102(b) as allegedly being

anticipated by Kruest (U.S. 5,963,144). Claims 2-4 and 16 stand rejected under 35 U.S.C. 103(a)

as allegedly being unpatentable over Kruest as applied to claim 1 and further in view of

Snodgrass et al. (U.S. 5,583,850). Claims 5 and 17-18 stand rejected under 35 U.S.C. 103(a) as

allegedly being unpatentable over Kruest in view of Snodgrass et al. as applied to claims 1-2 and

15 and further in view of Wood, Jr. (U.S. 6,104,333). Claim 13 stands rejected under 35 U.S.C.

103(a) as allegedly being unpatentable over Kruest as applied to claim 1 in view of Alicot et al.

(U.S. 5,990,794). Claims 19 and 24 stand rejected under 35 U.S.C. 103(a) as allegedly being

unpatentable over Kruest in view of Shafer (U.S. 5,942,978). Claim 25 stands rejected under 35

U.S.C. 103(a) as allegedly being unpatentable over Kruest in view of Shafer as applied to claim

19 in view of Atlkins et al. (U.S. 6,661,336). Claim 26 stands rejected under 35 U.S.C. 103(a) as

Applicant : Bruce B. Roesner, Ph.D.   Attorney's Docket No.: 16165-005001
Serial No. : 10/666,226
Filed   : September 17, 2003
Page   : 11 of 17

allegedly being unpatentable over Kruest in view of Shafer and Altkins et al as applied to claim

25 and further in view of Alicot et al. These contentions are respectfully traversed.

Independent claim 19 recites, "a radio frequency identification (RFID) tag reader that

sends commands including at least one sequence of associated commands used to identify an

RFID tag on an article; and multiple passive RFID tags, each tag being attached to an article and

each tag comprising a radio frequency sub system and control logic coupled with the radio

frequency sub system, wherein the control logic resets tag communications and initiates a non

responsive state in response to at least one event, the non responsive state being independent of

supplied power, and the control logic responds to a wake command but ignores other commands

in the command sequence while the tag is in the non responsive state, and the wake command

response concludes the non responsive state." (Emphasis added.)

In rejecting independent claim 19, the Official Action refers to two different and distinct

states taught by Kruest: (1) a traditional isolate state (which is briefly described in Kruest's

background), and (2) the CLOAK state described in Kruest's detailed description. With respect

to the isolate state, the Official Action notes, "The powering off and on cycle has the effect of

resetting the logic circuit in the RFID tag allowing it to respond anew (col. 2 lines 50-55)." (See

Office Action at page 6.) As this makes clear, in contrast with the presently claimed subject

matter, the isolate state described in Kruest is not independent of supplied power. To the

contrary, Kruest and the Office Action explicitly disclose and acknowledge that the described

state is dependent on supplied power.

Furthermore, while the CLOAK state described in Kruest is independent of supplied power, this state <u>times out</u> after a predetermined period. (*See* Kruest at col. 3, lines 26-34.) There is no wake command described in Kruest that affects the CLOAK state. To the contrary, the Radio Frequency Identification (RFID) tag of Kruest is not physically capable of responding to a wake command while in the CLOAK state because the antenna is disconnected from the control logic. (*See* Kruest at col. 2, line 62 to col. 3, line 13.) In Kruest, the interrogator/reader <u>cannot</u> communicate with the RFID tag during the CLOAK period because the antenna is disconnected, and thus, no wake command can be received and processed by the CLOAKED RFID tag described in Kruest.

In contrast with Kruest, claim 19 is directed to a system including an RFID tag with a non-responsive state that is independent of supplied power, and control logic that responds to a wake command but ignores other commands in the command sequence while the tag is in the non responsive state, where the wake command response concludes the non responsive state. Thus, the presently claimed subject matter can prevent a tag from jumping into the middle of current tag-reader communications using a non-responsive state that is independent of supplied power (the non-responsive state is maintained even if the tag falls out of the RF field), but this non-responsive state can still be concluded by a wake command. (*See* present specification at ¶'s 24, 25 and 32.) Kruest and the art of record fails to teach or suggest this claimed subject matter. Thus, independent claim 19 should be in condition for allowance.

With respect to independent claim 1, Kruest fails to teach or suggest the claimed following state because Kruest provides no details regarding any state of operation of Kruest's

Applicant : Bruce B. Roesner, Ph.D.   Attorney's Docket No.: 16165-005001
Serial No. : 10/666,226
Filed   : September 17, 2003
Page   : 13 of 17

RFID tag, except for the CLOAK state. The Official Action fails to address this deficiency of

Kruest. For claim 1, the Official Action notes that the non-responsive CLOAK state ends after a

time delay of 2-5 seconds (*see* Official Action at page 3), but the bare fact that the CLOAK state

ends provides no information about what state the RFID tag enters after the CLOAK state. For

independent claims 15 and 27, the Official Action appears to confuse the isolate state described

in Kruest's background with the CLOAK state described in Kruest's detailed description (*see*

Official Action at page 3), and fails to address the claimed interaction of the non-responsive state

(that is independent of supplied power) and the command structure.

Nonetheless, to expedite prosecution and more clearly differentiate the subject matter

claimed in the present application, independent claims 1, 15 and 27 have been amended to

specify that the non-responsive state concludes in response to receipt of a wake command. In

view of the above amendments and remarks, the art of record clearly fails to teach or suggest the

subject matter of claims 1, 15 and 27.

In particular, Kruest does not allow its non-responsive state to conclude upon receipt of a

wake command because such an extension is not technically possible. Kruest describes an RFID

tag in which a CLOAK state involves <u>disconnecting</u> the RFID antenna in the tag for a

predetermined time period. (*See* Kruest at col. 2, line 62 to col. 3, line 67; col. 5, lines 8-12; and

col. 5, line 41 to col. 6, line 17.) This disconnection of the antenna prevents communications

with the tag all together while the tag is in the CLOAK state. Thus, the RFID tag of Kruest is

physically incapable of receiving a wake command while in the CLOAK state.

Furthermore, Kruest seeks to keep the RFID tags inactive and noninterferring with the RF field. A primary goal of Kruest is to minimize interference (by an already read tag) by reducing the effective absorption and scattering aperture of the tag's antenna to near zero; thus electromagnetically removing the RFID tag from the zone of interrogation during the predetermined time period. (*See* Kruest at col. 2, line 62 to col. 3, line 35; col. 3, lines 55-59; col. 4, lines 35-60; and col. 6, lines 35-52.) In contrast, the claimed subject matter of the present application maintains the RFID tag in a state that can still receive input, and thus the antenna is still interfering in the RF field. (*See* present specification at ¶'s 25, 28, 31 and 35.) Thus, Kruest teaches away from the presently claimed subject matter.

In view of the above, independent claims 1, 15 and 27 are in condition for allowance. Dependent claims 2-5, 13-14, 16-18 and 24-26 are patentable based on the above remarks and their own merits. For example, with respect to claim 2, the cited portions of Snodgrass describe how a responder station can identify and respond to a command directed to the station. While multiple commands are shown and described in connection with Figure 11 of Snodgrass, these are each individual commands that do not build on each other because each response to a command results in a transition back to the same idle state 310. (*See e.g.*, Figure 11 of Snodgrass and Figure 3 of the present application.) Thus, the proposed combination of Kruest with Snodgrass fails to describe, as recited in claim 2, "wherein the following state comprises an initial communication state from a plurality of communication states, wherein the plurality of communication states allow response to <u>a sequence of associated commands</u> <u>when receipt of the command sequence begins in the initial communication state</u>." (Emphasis added.)

Applicant : Bruce B. Roesner, Ph.D.   Attorney's Docket No.: 16165-005001
Serial No. : 10/666,226
Filed   : September 17, 2003
Page   : 15 of 17

Additionally, it should be noted that Kruest is focused on a very different technical issue

than Snodgrass and Wood. Kruest's cloaking technique is directed to allowing a passive RFID

tag to retain its state even when power is removed, thereby eliminating multiple readings of the

same tag when powered up multiple times. In contrast, Wood and Snodgrass describe anti-

collision techniques used during a single interrogation session, where the tag remains powered

during the entire session.

In general, the proposed combinations of Kruest with Snodgrass, Wood, Alicot, Shafer

and Atlkins fail to establish a prima facie case of obviousness because the proposed

combinations fail to teach or suggest all the claim limitations, there is not a reasonable

expectation of success for the proposed combinations, and Kruest teaches away from the

proposed combinations.

In the Response to Arguments section, the Official Action states, "Kruest suggests the

interrogator communicates with RFID tags through the RF field and the tag in the cloak state

when responses to a logic command in an identification system (col. 3, lines 1-13)." (*See* Office

Action at pages 4 &5.) However, the cited portion of Kruest in fact makes very clear that the

RFID tag cannot receive communications from the interrogator while in the CLOAK state:

> An RC circuit is charged by activation of the CLOAK signal and thereafter
> discharges during a predetermined RC time period as determined by a high
> impedance series antifuse leakage transistor. The antenna is thus disconnected for
> a time sufficient to allow the remaining RFID tags in an RF interrogation field to
> be identified. Meanwhile, during the disconnection of the antenna from the RFID
> chip and its loading causes its effective absorption and scattering aperture to be
> reduced near zero so as to electromagnetically remove the RFID tag from the

Applicant : Bruce B. Roesner, Ph.D.   Attorney's Docket No.: 16165-005001
Serial No. : 10/666,226
Filed   : September 17, 2003
Page   : 16 of 17

zone of interrogation during the predetermined time period. Hence, the
interrogated tag remains disconnected and noninterferring with the RF field used
to interrogate the remaining tags.

(See Kruest at col. 3, lines 1-13; emphasis added.) A passive RFID tag in a noninterferring state,

as described in Kruest, cannot receive a wake command because the tag must interfere with the

RF field to receive communications from the interrogator. Moreover, one skilled in the art

would not be motivated to modify Kruest to allow for receipt of a wake command because this

would require reconnecting the antenna to make the tag interfere in the RF field, which

undermines Kruest's goal of reducing interference by the cloaked tags.

Conclusion

It is believed that all of the pending claims have been addressed. However, the absence

of a reply to a specific issue or comment does not signify agreement with or concession of that

issue or comment. Because the arguments made above may not be exhaustive, there may be

reasons for patentability of any or all pending claims (or other claims) that have not been

expressed. Finally, nothing in this paper should be construed as an intent to concede any issue

with regard to any claim, except as specifically stated in this paper, and the amendment of any

claim does not necessarily signify concession of unpatentability of the claim prior to its

amendment.

It is respectfully suggested for all of these reasons, that the current rejection is overcome,

that none of the cited art teaches or suggests the features which are claimed, and therefore that all

Applicant : Bruce B. Roesner, Ph.D.   Attorney's Docket No.: 16165-005001
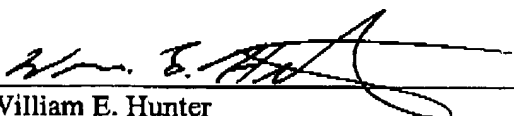Serial No. : 10/666,226
Filed   : September 17, 2003
Page   : 17 of 17

of these claims are in condition for allowance. A formal notice of allowance is thus respectfully

requested.

No fees are believed due with this response. Please apply any necessary charges or

credits to deposit account 06-1050.

Respectfully submitted,

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